ABSTRACT

The present invention provides a water-soluble luminescent quantum dot, a biomolecular conjugate thereof and a composition comprising such a quantum dot or conjugate. Additionally, the present invention provides a method of obtaining a luminescent quantum dot, a method of making a biomolecular conjugate thereof, and methods of using a biomolecular conjugate for ultrasensitive nonisotopic detection *in vitro* and *in vivo*.

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